

Name: _____

Alloy Presentation Chemistry/Technical Content

We have already discussed some of the specific information you'll need. However, below is an overview that should be helpful while you are researching. A large portion of the project grade will be based upon the inclusion and explanation of the items below.

1) *Chemical composition/Percent composition:*

- correct alloy name explaining the naming system and what the numbers/letters represent
- what elements are in your alloy
- what percentages of each
- why is each element added (what properties does it give your alloy)

2) *Density (g/cm³)*

3) *Mechanical Properties:*

- hardness value or range (know what scale and what it means)
- tensile strength (ksi)
- any other of the properties listed in chapter 4

4) *Chemical, Electrical, Stress/Strain Relationship, Thermal, or Other Properties* (see Figure 4-1 on page 48 of chapter 4 out of the blue metallurgy book)

- pick whatever properties are important and significant to the use of your alloy for your product
- MAKE SURE YOU UNDERSTAND whatever properties you discuss or give values for – DO NOT INCLUDE INFORMATION THAT YOU CAN NOT EXPLAIN OR ANSWER QUESTIONS ABOUT

5) If your alloy has been *heat treated* in any way for the application of your product, then you need to discuss & explain the heat treat details. If not, tell why.

6) You MUST include the *manufacturing process(es)* used to make your product. This is usually a very interesting portion of your presentation. Make sure to refer to the gray "Manufacturing Processes Reference Guide" and the green "Fundamental Principles of Manufacturing Processes" books that are on the shelf.

* You may find other information that does not fall into one of these categories.